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24273	7590	06/05/2007	EXAMINER	
MOTOROLA, INC			KARIKARI, KWASI	
INTELLECTUAL PROPERTY SECTION				
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			ART UNIT	PAPER NUMBER
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			06/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/668,865	Applicant(s) LOGALBO ET AL.	
	Examiner Kwasi Karikari	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Response to Arguments

2. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

3. Claims 11-23 have been added.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification mentions the method claims of the Applicant's invention; but fails to show that the method are been installed or implemented in a hard ware. For

examination purposes, the examiner will treat the rejected claimed limitations in light of the overall concept of Applicant's specification. Appropriate corrections are as again required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-11 are rejected under U.S.C. 103(a) as being unpatentable over
Lansford et al., (U.S 20030178984), (hereinafter Lansford) in view of
Sherman (U.S 7,031,274), (hereinafter Sherman).**

Regarding **claim 1**, Lansford discloses a method for supporting a plurality of devices operating on different frequency (hopping frequency; Pars. [0016 and 0020]) bands comprising, during a first period of time:

initiating a contention free period at a first frequency; switching from the first frequency to a second frequency (A and B; see Pars. [0028-29]);

communicating with devices operating at the second frequency (A and B communicates, see Pars. [0031-32]); and

periodically during the first period of time, temporarily ceasing the step of

(see Pars. [0014-15]) communicating with devices operating at the second frequency to initiate a contention free period at the second frequency, switch from the second frequency to the first frequency (A hops back to B, see Par. [0033]), initiate another contention free period at the first frequency, and switch from the first frequency back to the second frequency (A to D using 2nd protocol, see Par. [0033-35]). Furthermore, Lansford mentioned a controller (see Par. 0012), but fails specifically to mention an "access point".

Sherman teaches an "access point" (= WLANs are accessed through stations the operate as the access ports, see col. 2, line 62- col. 3, line 14).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Sherman with the system of Lansford for the benefit of achieving a communication system that includes power saving elements (see col. 4, lines 41-67).

Regarding **claim 2**, as recited in claim 1, Lansford further discloses the method, wherein the first period of time is divided into intervals, and wherein the step of temporarily ceasing the step of communicating with devices operating at the second frequency occurs during each interval in the first period of time (see Pars. 0019-20 and 0032-33).

Regarding **claim 3**, as recited in claim 1, Sherman further discloses "multicast data transmission (= PS stations must awake to receive broadcast/multicast, see col. 4, line 54- col. 5, line 40).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Sherman with the system of Lansford for the benefit of achieving a communication system that includes power saving elements (see col. 4, lines 41-67).

Regarding **claim 4**, as recited in claim 1, Lansford further discloses the method, wherein initiating a contention free period comprises transmitting a beacon message (see Par. [0028]).

Regarding **claim 5**, as recited in claim 1, Lansford discloses that the method, further comprising, during a second period of time:

initiating a contention free period at the second frequency (see Pars. [0014-15]);
switching from the second frequency to the first frequency (see Pars. [0014-15];
communicating with devices operating at the first frequency; and
periodically during the second period of time, temporarily ceasing the step of communicating with devices operating at the first frequency to initiate a contention free period at the first frequency, switch from the first frequency to the second frequency (see Pars. [0019-22]) initiate another contention free period at the second frequency, and switch from the second frequency back to the first frequency (see Pars. [0033-35]). Furthermore, Lansford mentioned a controller (see Par. 0012), but fails specifically to mention an "access point".

Sherman teaches an "access point" (= WLANs are accessed through stations the operate as the access ports, see col. 2, line 62- col. 3, line 14).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Sherman with the system of Lansford for the benefit of achieving a communication system that includes power saving elements (see col. 4, lines 41-67).

Regarding **claim 6**, as recited in claim 5, Lansford further discloses the method, wherein the second period of time is divided into intervals (see Pars. [0019]), and wherein the step of temporarily ceasing the step of communicating with devices operating at the first frequency occurs during each interval in the second period of time (see Pars. [0019-20 and 0032-33]).

Regarding **claim 7**, as recited in claim 5, Lansford discloses that the method, further comprising the steps of: after the step of switching from the second frequency to the first frequency, initiating a contention free period at the first frequency; transmitting data to subscribers operating at the first frequency (communication between class of devices, see Par. [0012]); and ending the contention free period at the first frequency (see Pars. [0013-15, 0023 and 0032-33]). Furthermore, Lansford mentioned a controller (see Par. 0012), but fails specifically to mention an "access point".

Sherman teaches an "access point" (= WLANs are accessed through stations the operate as the access ports, see col. 2, line 62- col. 3, line 14).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Sherman with the system of Lansford for the benefit of achieving a communication system that includes power saving elements (see col. 4, lines 41-67).

Regarding **claim 8**, Lansford further disclose a method for supporting a plurality of devices operating on different frequency bands (hopping frequency, see Pars. [0016 and 0020]) comprising, during a first period of time, initiating a contention free period at a first frequency; switching from the first frequency to a second frequency; and communicating with devices operating at the second frequency (see Pars. [0013-15]), during a second period of time, initiating a contention free period at the second frequency; switching from the second frequency to the first frequency; and communicating with devices operating at the first frequency (see Pars. [0013-15]). Furthermore, Lansford mentioned a controller (see Par. 0012), but fails specifically to mention an "access point".

Sherman teaches an "access point" (= WLANs are accessed through stations the operate as the access ports, see col. 2, line 62- col. 3, line 14).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Sherman with the system of Lansford for the benefit of achieving a communication system that includes power saving elements (see col. 4, lines 41-67).

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Regarding **claim 9**, as recited in claim 8, Lansford discloses that the method, further comprising, during the first period of time: after the step of switching from the first frequency to the second frequency, initiating a contention free period at the second frequency; transmitting data (see Pars. [0012]) to subscribers operating at the second frequency (see Pars. [0033-35]); and ending the contention free period at the second frequency (see Pars. [0013-15]).

Regarding **claim 10**, as recited in claim 8, Lansford discloses that the method, further comprising, during the second period of time: after the step of switching from the second frequency to the first frequency (see Pars. [0033-35]), initiating a contention free period at the first frequency; transmitting data (see Pars. [0012]) to subscribers operating at the first frequency; and ending the contention free period at the first frequency (see Pars. [0013-15]).

Regarding **claim 11**, Lansford discloses a method for supporting a plurality of devices operating on different frequency bands comprising, during a first period of time,

initiating a contention free period at a first frequency; switching from the first frequency to a second frequency (A and B; see Pars. [0028-29]);

initiating a contention free period at the second frequency; ending the contention free period at the second frequency; and communicating with devices operating at the second frequency (see Pars. [0014-15]),

during a second period of time, initiating a contention free period at the second frequency; switching from the second frequency to the first frequency (see Pars. [0019-22]; initiating a contention free period at the first frequency; ending the contention free period at the first frequency; and communicating with devices operating at the first frequency (see Pars. [000012-16]. Furthermore, Lansford mentioned a controller (see Par. 0012), but fails specifically to mention an "access point" and the transmission of multicast data

Sherman teaches an "access point" (= WLANs are accessed through stations the operate as the access ports, see col. 2, line 62- col. 3, line 14) and the transmission of multicast data (= PS stations must awake to receive broadcast/multicast, see col. 4, line 54- col. 5, line 40).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Sherman with the system of Lansford for the benefit of achieving a communication system that includes power saving elements (see col. 4, lines 41-67).

6. Claims 12-23 are rejected under U.S.C. 103(a) as being unpatentable over Lansford in view of Sherman and further in view of Benveniste (U.S 20030174690), (hereinafter Benveniste).

Regarding **claim 12**, as recited in claim 11, the combination of Lansford and Sherman fails specifically to teach "initiating a distributed coordinated function mode prior to communicating with devices".

However, Benveniste teaches "initiating a distributed coordinated function mode prior to communicating with devices" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 13**, as recited in claim 12, the combination of Lansford and Sherman fails specifically to teach wherein "initiating the distributed coordinated function mode allows devices operate without having to be polled".

However, Benveniste teaches " wherein initiating the distributed coordinated function mode allows devices operate without having to be polled" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 14**, as recited in claim 11, the combination of Lansford and Sherman fails specifically to teach wherein " initiating a distributed coordinated function mode prior to communicating with devices"

However, Benveniste teaches "initiating a distributed coordinated function mode prior to communicating with devices" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 15**, as recited in claim 14, the combination of Lansford and Sherman fails specifically to teach wherein "initiating the distributed coordinated function mode allows devices operating without having to be polled".

However, Benveniste teaches "initiating the distributed coordinated function mode allows devices operating without having to be polled" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 16**, as recited in claim 1, the combination of Lansford and Sherman fails specifically to teach wherein "initiating a distributed coordinated function mode prior to communicating with devices"

However, Benveniste teaches "initiating a distributed coordinated function mode prior to communicating with devices" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 17**, as recited in claim 16, the combination of Lansford and Sherman fails specifically to teach wherein "initiating the distributed coordinated function mode allows devices operating without having to be polled".

However, Benveniste teaches "initiating the distributed coordinated function mode allows devices operating without having to be polled" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 18**, as recited in claim 5, the combination of Lansford and Sherman fails specifically to teach wherein "initiating a distributed coordinated function mode prior to communicating with devices"

However, Benveniste teaches "initiating a distributed coordinated function mode prior to communicating with devices" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 19**, as recited in claim 18, the combination of Lansford and Sherman fails specifically to teach wherein "initiating the distributed coordinated function mode allows devices operating without having to be polled".

However, Benveniste teaches "initiating the distributed coordinated function mode allows devices operating without having to be polled" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 20**, as recited in claim 8, the combination of Lansford and Sherman fails specifically to teach wherein "initiating a distributed coordinated function mode prior to communicating with devices"

However, Benveniste teaches "initiating a distributed coordinated function mode prior to communicating with devices" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 21**, as recited in claim 20, the combination of Lansford and Sherman fails specifically to teach wherein "initiating the distributed coordinated function mode allows devices operating without having to be polled".

However, Benveniste teaches "initiating the distributed coordinated function mode allows devices operating without having to be polled" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 22**, as recited in claim 8, the combination of Lansford and Sherman fails specifically to teach wherein "initiating a distributed coordinated function mode prior to communicating with devices"

However, Benveniste teaches "initiating a distributed coordinated function mode prior to communicating with devices" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Regarding **claim 23**, as recited in claim 22, the combination of Lansford and Sherman fails specifically to teach wherein "initiating the distributed coordinated function mode allows devices operating without having to be polled".

However, Benveniste teaches "initiating the distributed coordinated function mode allows devices operating without having to be polled" (= DCF access procedure begins following contention free period, see Par. 0028).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Benveniste with the system of Lansford and Sherman for the benefit of achieving a communication system that include channel reservation with the aid of network allocation vector (see Par. 0035).

Conclusion

7. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to

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specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

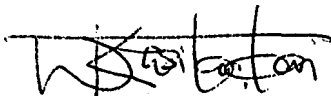
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of ³³the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwasi Karikari whose telephone number is 571-272-8566. The examiner can normally be reached on M-F (8 am - 4pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8566.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kwasi Karikari
Patent Examiner.

05/22/07



JOSEPH FEILD
SUPERVISORY PATENT EXAMINER